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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,833	10/08/2003	Marcos Kamezos	CPAC 1029-4	6605
22470	7590	06/30/2004	EXAMINER	
HAYNES BEFFEL & WOLFELD LLP			GREENE, PERSHELLE L	
P O BOX 366			ART UNIT	
HALF MOON BAY, CA 94019			PAPER NUMBER	
			2826	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,833

Applicant(s)

KARNEZOS, MARCOS

Examiner

Pershelle Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 5,7-11,21-23,26 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,12-20,24,25,27,29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Serial Number: 10/681833

Attorney's Docket #: CPAC 1029-4

Filing Date: 10/08/2003

Applicant: Karnezos

Examiner: Pershelle Greene

DETAILED ACTION

Election/Restrictions

I. Applicant's election without traverse of Species VII: Figure 7B in the reply filed on 5/21/04 is acknowledged.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "313" and "315" have both been used to designate the adhesive. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

It is unclear where reference number "315" is pointing.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 25 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 25 and 27, it is unclear and confusing what is meant by “die-down”? The specification is not clear as to the meaning of “die down”. Does this have anything to do with which way the active layer is facing? Please clarify.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6, 12-20, 24, 25, 27 and 29-30, ***in so far as can be understood***, are rejected under 35 U.S.C. 102(e) as being anticipated by Hoffman et al. (U.S. Patent # 6,737,750).

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As to claims 1 and 12, Hoffman et al. shows, referring to figure 13, an inverted second package 16 over a first package 12, the stacked packages being electronically interconnected by wire bonds 20a, wherein at least one package is provided with an electrical shield 33.

As the claim 2, the first package 12 is provided with the electrical shield.

As to claim 3, the electrical shield is configured to serve as a heat spreader.

As to claim 4, the package that is provided with an electrical shield includes an RF die and the shield serves to limit electromagnetic interference between the RF die and other die in the multi-package module.

As to claim 6, the first package is a flip-chip ball grid array package having a flip-chip in a die-down configuration.

As to claim 13 the first package comprises providing an unsingulated strip of packages.

As to claim 14, the inverted second package is stacked onto the upper surface of the shield and comprises applying adhesive 30 onto an upper surface of the shield and placing the inverted package onto the adhesive.

As to claim 15, the adhesive is a curable adhesive.

As to claims 16 and 17, the first and second packages comprise testing packages for a performance and reliability requirement and selecting the first package and second packages as meeting the requirement.

As to claim 18, there is a second level of interconnect balls on the first package substrate.

As to claim 19, the stacked packages are encapsulated.

As to claim 20, the first package comprises a ball grid array package.

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As to claim 24, the first package comprises providing a flip chip ball grid array package.

As to claim 25, the first package having a shield has a die-down flip chip ball grid array package.

As to claim 27, there is a die-down flip chip ball grid array package having a shield comprises providing a package having a shield including a generally planar part over the die.

As to claim 29 and 30, there is an inverted second package stacked over the first package, wire bonds, wherein at least one package is provided with an electrical shield, electronically interconnect the stacked packages. The package can be used in mobile devices as well as computers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pershelle Greene whose telephone number is 571-272-1917. The examiner can normally be reached on M-F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PLG

June 25, 2004


Minhloan Tran
Primary Examiner
Art Unit 2826